RV Brooks McCall Data Summary
Cruise 5/21/2010

Review Date 5/22/2010

Summary:

This sampling report presents data collected from the RV Brooks McCall for the period of 5/21/2010. The sampling strategy for the day was to continue to investigate the presence of the deep plume SW of the wellhead. Due to the decreased fluorescence (concentration of oil) in this location over time, additional sampling was conducted due East, North and West of the wellhead at a 1.5 Km radius. Fluorometry data picked up the presence of a significant plume from Station B41 to the West suggesting that the plume may have shifted to a more WSW direction. A total of 14,400 gallons of dispersant was used at a rate of 10 gallons per minute over the period.

Stations B38 through B41 were sampled over the period for: TPH, VOAs, oil dispersion (LISST and C-3 fluorometry), temperature, dissolved oxygen and sample depth. Station B36 was revisited during this cruise. Samples were collected from approximately 2, 50, 100, 200, 500, 750, 1000, 1200, 1300, 1400 and 1475 meters below water surface. Actual depths may be different due to actual water column depth. No data were provided for review for TPH or VOAs, however, toxicity results for 5/20 were made available for review.

LISST, C-3 Fluorometer and CTD Fluorometer:

LISST data showed dispersed oil at the surface at all Stations (B38 - B41). A total of 92 samples were analyzed. LISST analyses indicted much less dispersion of the oil (i.e., larger particles) in the deep plume.

Data collected with the CTD fluorometer found a significant fluorescence signal at Station B41, 1.5 Km West of the wellhead at a depth between 1100 meters and 1300 meters. This suggests that the deep plume has likely shifted to a more westerly direction, rather than diminishing as previously reported.

A total of 4 tows were made with the Turner 3 Towfish Fluorometer.

Dissolved Oxygen:

Dissolved oxygen values ranged between 2.7 and 7.1 mg/l. The use of the colorimetric method for dissolved oxygen analysis (LaMotte field kit) was resumed. The results indicate that the colorimetric measurements generally produced a higher result for the same water sample than the Extech hand-held probe. It also indicates that both the LaMotte measurements and the Extech measurements were slightly lower than the profile results. It appears that the

Extech probe might need some cleaning to perform as well as previously demonstrated.

Toxicity Testing (Rototox Assay):
No samples for toxicity testing were collected during this reporting period, however, results from the 5/20 sampling period were made available for review. Testing organisms were exposed to two samples, one at 300m with no fluorescence signal (B36D), and one in the middle of the deep dispersed oil plume (B 36J). No significant toxicity was indicted in dispersed oil plume relative to lab controls.

Chemical Analyses (TPH and VOAs):
Forty-eight (48) samples were collected for VOA analysis and forty (40) samples were collected for TPH analysis. No data were provided for review at this time due to laboratory lag time.

Operational Notes:
No significant items.